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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/516,831 | 12/03/2004 | Stuart Hepworth | GJ-259J | 7330 |
| 7590 | 09/01/2005 | | EXAMINER | |
| Iandiorio & Teska 260 Bear Hill Road Waltham, MA 02451-1018 | | | LEUNG, PHILIP H | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3742 | |

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|-----------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/516,831 | HEPWORTH ET AL. | |
| | Examiner Philip H. Leung | Art Unit 3742 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-13 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 03 December 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12-3-2004</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

1. The drawings filed 12-3-2005 are acceptable.
2. The abstract of the disclosure is objected to because the form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. Correction is required.

See MPEP § 608.01(b).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3 and 7-13 are rejected under 35 U.S.C. 103(a) as being obvious over Arimatsu (US 4,456,806), in view of Nissan Motor (JP 3-189216) (both cited by the applicant).

Arimatsu shows an apparatus for warming a tyre comprising a container (heating chamber 1) in which the tyre is heated, mounting means (turntable 3) which is positioned in the

container and on which the tyre is mounted, generator means (4-8) for generating electromagnetic energy of a frequency that heats the tyre, temperature indicator means (13) for indicating the temperature of the tyre, and control means (14-16) for controlling the operation of the apparatus (see Figures 1-5 and col. 2, line 61 – col. 3, line 56). Therefore, Arimatsu shows every feature except that the tyre being heat-treated is not mounted on a wheel. However, Arimatsu clearly can be used to heat any tyre structure as it has all the claimed structure. Anyway, Nissan Motor shows that it is old and well known to warm tyre mounted on a wheel of a vehicle by a high frequency generator to a suitable temperature to improve the running performance of the vehicle. It would have been obvious to an ordinary skill in the art at the time of invention to modify Arimatsu to use the apparatus for warming tyre on a wheel so that the running performance can be improved after a short driving period to increase its utilities, in view of the teaching of Nissan Motor. In regard to claims 9, 11-13, Nissan Motor shows vertically mounted wheel (claim 9); the use of radio frequency as the electromagnetic energy (claim 11); metal conductors 14 as an active part (claim 12) and the device is portable (claim 13).

5. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arimatsu (US 4,456,806), in view of Nissan Motor (JP 3-189216), as applied to claims 1-3 and 7-13 above, and further in view of Searle et al (US 3,566,066) (cited by the applicant).

As set forth above, Arimatsu combined with Nissan Motor shows every feature as claimed except for the explicit showing of the door structure. Although not shown explicitly, a door must obviously be provided in the container (heating chamber 1) of Arimatsu in order to load and discharge of the tyre and to shield the microwave energy from escaping from the chamber.

Anyway, Searle shows a microwave heating chamber 1 with a lid 2 for heating a tyre on a rotating support 4 and a door operating assembly 3 for quick opening of the door (see Figure 1 and col. 2, lines 18-40). It would have been further obvious to an ordinary skill in the art at the time of invention to modify Arimatsu modified with Nissan Motor to provide a door with a quick opening device so that the tyre can be easily loaded and unload from the chamber, in view of the teaching of Searle. In regard to claim 6, Searle shows that the chamber 1 is a cylindrical shape.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bridgestone Corp (JP 5-301230) is further cited to show a microwave device for heating a tyre with similar claimed features.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (571) 272-4782. The examiner can normally be reached on flexible.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Philip H Leung
Primary Examiner
Art Unit 3742